

I CLAIM:

1. A disk drive comprising:

a disk drive housing including a housing body portion and an airflow suppressor portion extending from the housing body portion;

a disk rotatably coupled to and adjacent the housing body portion, the disk including an inner disk edge, an outer disk edge and a disk surface disposed between the inner and outer disk edges; and

a head stack assembly rotatably coupled to the housing body portion about a pivot axis, the head stack assembly including an actuator arm including a first arm surface disposed adjacent the disk surface and an opposing second arm surface, the head stack assembly being sized and configured to pivot the actuator arm; and

upstream and downstream regions disposed along the disk surface, the upstream and downstream regions being divided by a plane perpendicular to the disk surface through the pivot axis and tangent to the inner disk edge adjacentmost the actuator arm, the upstream region including disk positions which rotate towards the actuator arm;

wherein the airflow suppressor portion is radially disposed substantially between the inner and outer disk edges within the upstream region and extends substantially entirely from the housing body portion beyond the second arm surface towards the disk surface for modifying disk rotation induced airflow upon the head stack assembly adjacent to the disk surface.

2. The disk drive of Claim 1 wherein the airflow suppressor portion includes a trailing side disposed and an opposing leading side.

1 3. The disk drive of Claim 2 wherein the trailing side is disposed adjacent the actuator arm
2 with the actuator arm in a parked position.

1 4. The disk drive of Claim 2 wherein the trailing side and the leading side are generally
2 parallel to each other.

1 5. The disk drive of Claim 2 wherein the trailing side and the leading side are tapered with
2 respect to each other from the inner disk edge towards the outer disk edge.

1 6. The disk drive of Claim 2 wherein the leading side is aligned generally tangential with the
2 inner disk edge.

1 7. The disk drive of Claim 1 wherein the disk surface includes an inner non-data annular
2 region, the airflow suppressor portion includes a main section disposed substantially between the
3 inner and outer disk edges and an inner disk limiter section extending from the main section towards
4 the inner non-data annular region.

1 8. The disk drive of Claim 7 wherein the main section and the inner disk limiter section are
2 integrally formed.

1 9. The disk drive of Claim 1 wherein the disk surface includes an outer non-data annular
2 region, the airflow suppressor portion includes a main section disposed substantially between the
3 inner and outer disk edges and an outer disk limiter section extending from the main section towards
4 the outer non-data annular region.

- 1 10. The disk drive of Claim 9 wherein the main section and the outer disk limiter section are
2 integrally formed.
- 1 11. The disk drive of Claim 1 wherein the airflow suppressor portion is integrally formed with
2 the housing body portion.
- 1 12. The disk drive of Claim 1 wherein the airflow suppressor portion is formed of a metal
2 material.
- 1 13. The disk drive of Claim 12 wherein the airflow suppressor portion includes a non-
2 conductive coating.
- 1 14. The disk drive of Claim 1 wherein the airflow suppressor portion is formed of a plastic
2 material.
- 1 15. The disk drive of Claim 1 wherein the housing body portion is a disk drive base.
- 1 16. The disk drive of Claim 1 wherein the housing body portion is a disk drive cover.